IMPROVE SPEECH RECOGNITION BY DYNAMICAL NOISE MODEL ADAPTATION

ABSTRACT

The invention provides a Hidden Markov Model (132) based automated speech recognition system (100) that dynamically adapts to changing background noise by detecting long pauses in speech, and for each pause processing background noise during the pause to extract a feature vector that characterizes the background noise, identifying a Gaussian mixture component of noise states that most closely matches the extracted feature vector, and updating the mean of the identified Gaussian mixture component so that it more closely matches the extracted feature vector, and consequently more closely matches the current noise environment. Alternatively, the process is also applied to refine the Gaussian mixtures associated with other emitting states of the Hidden Markov Model.